

STUDIES IN THE EUPATORIEAE (ASTERACEAE). CXXV.

ADDITIONS TO THE GENUS, BARTLETTINA.

R. M. King and H. Robinson
Smithsonian Institution, Washington, D.C. 20560.

Recent efforts on floristic and cytological studies have required a critical review of the rather chaotic species concepts in the largely Mexican and Central American genus Bartlettina. Among the numerous species some revisions have been required including the reduction of B. ruuae(Standley) K. & R. to the synonymy of B. pansamalensis(B.L.Robinson) K. & R. and the recognition of the following three new species. Duplicates of Breedlove collections of two of the following species may be filed in other herbaria under the name Eupatorium aschenbornianum Schauer. The latter name actually applies to a distinctive Mexican and Central American species of Ageratina.

Bartlettina breedlovei R.M.King & H.Robinson, sp. nov. Plantae erectae frutescentes usque ad 3.5 m altae. Caules teretes leniter striati rufo-hirtelli interdum fistulosi. Folia opposita, petiolis usque ad 3.5 cm longis angustis; laminae ovatae usque ad 7 cm longae et 5 cm latae base subtruncatae vel breviter cuneata vix breviter acuminatae margine argute multiserratae apice breviter acuminatae vel longe acutae supra sparsim breviter pilosae subtus distincte multo glandulo-punctatae, nervis subtus dense puberulis, nervis secondariis inferne aliquantum congestis subtrinervatis. Inflorescentiae subcongestae late pyramidaliter paniculatae, ramis corymbosis, pedicellis 3-8 mm longis dense hirtellis. Capitula 7-8 mm alta; squamae involucri 20-25 subimbricatae ca. 3-seriatae extus dense puberulae exteriore anguste lanceolatae vel oblongo-lanceolatae 2-3 mm longae acutae interiores anguste oblongae 5-6 mm longae apice breviter vel longe acutae anguste scariosae dense minute fimbriatae; receptacula glabra. Flores ca. 30-40. Corollae purpureae ca. 3.5-4.5 mm longae anguste infundibulares, tubis indistinctis, lobis 5 equilateraliter triangularibus extus setiferis et glanduliferis; filamenta antherarum in parte superiore angusta 0.5-0.6 mm longa; thecae 1.2-1.5 mm longae, appendicibus late oblongis ca. 150 μ longis et 200 μ latis; appendices stylorum

lineares dense breviter papillosae. Achaenia ca. 2 mm longa glabra; carpopodia brevia; setae pappi ca. 35 plerumque 4-5 mm longae ad apicem non dilatatae. Grana pollinis ca. 20 μ diam. micropapillosae.

Type: MEXICO: Chiapas: San Cristobal las Casas to Tenejapa. Chamula paraje of Las Ollas. Municipio of San Cristobal las Casas. Elevation 8300 ft. 19 Feb. 1965, Breedlove 9075 (Holotype US! Isotype DS!).

Paratype GUATEMALA: Huehuetenango: Sierra de los Cuchumatanes. Cloud forest 4 mi E of San Mateo Ixtatan on road to Barillas. Municipio of San Mateo Ixtatan. Elevation 8500 ft., February 7, 1965, Breedlove 8717 (DS!).

The species is related to a group that includes locally B. hylobia(B.L.Robinson) K. & R., B. oresbiooides (B.L.Robinson) K. & R. and B. guatemalensis K. & R. n. sp. below. These species all have the rather short anther appendages and the narrower rather oblong involucral bracts in a few series. The present species is distinct in the more pyramidal inflorescence, in the more acute tip of the involucral bracts and in the firmer more pubescent more prominently serrate leaves.

Bartlettina guatemalensis R.M.King & H.Robinson, sp. nov. Plantae erectae frutescentes usque ad 3.5 m altae. Caules teretes leniter striati minute puberuli non fistulosi. Folia opposita longe petiolata, petiolis usque ad 7 cm longis angustis; laminae ovato-rhomboidae usque ad 12 cm longae et 8 cm latae base late cuneatae et breviter acuminatae margine multo crenato-serratae apice breviter apiculatae supra sparsim puberulae subtus glandulo-punctatae, nervis subtus sparsim puberulis, nervis secondariis inferne aliquantum congestis subtrinervatis. Inflorescentiae subcongestae late corymboso-paniculatae, pedicellis 3-8 mm longis minute puberulis. Capitula 7-8 mm alta; squamae involucri ca. 15-18 subimbricatae ca. 3-seriatae extus distincte minute puberulae exteriores oblongo-lanceolatae vel anguste ellipticae 2-3 mm longae anguste obtusae interiores anguste oblongae ca. 5 mm longae apice obtusae vel breviter acutae scariosae minute fimbriatae; receptacula glabra. Flores ca. 20. Corollae lavendulaceae ca. 4 mm longae anguste infundibulares, tubis indistinctis, lobis 5 equilateraliter triangularibus extus multo setiferis et glanduliferis; filamenta antherarum in parte superne angusta ca. 0.5 mm

longa; thecae ca. 1 mm longae, appendicibus late oblongis ca. 150 μ longis et 200 μ latis; appendices stylorum lineares dense breviter papillosae. Achaenia 1.8-2.0 mm longa glabra; carpopodia prominentia; setae pappi ca. 40 plerumque 3.0-3.5 mm longae ad apicem non dilatatae. Grana pollinis ca. 20 μ diam. micro-papillosae.

Type: GUATEMALA: Quiche: Nebaj. 8600 ft., Nov. 17, 1934, Skutch 1700 (Holotype US!). Paratype: GUATEMALA: Huehuetenango: Sierra de los Cuchumatanes: Cloud forest 4 miles E of San Mateo Ixtatan on road to Barillas. Municipio of San Mateo Ixtatan. Elevation 8500 ft., February 7, 1965, Breedlove 8718 (DS!).

The species is closest to B. oresbioides also of Guatemala. The latter differs by its more closely and sharply serrate leaves. The also closely related B. hylobia of adjacent Chiapas has leaf serrations that are more remote but formed of very narrow sharply projecting teeth. Further collections may show that B. oresbioides is not distinct from B. hylobia.

Bartlettina matudae R.M.King & H.Robinson, sp. nov.
Plantae erectae frutescentes usque ad 2 m ? altae. Caules teretes in sicco corrugati dense hirsuti. Folia opposita, petiolis usque ad 9 cm longis; laminae latae ovatae ad 23 cm longae et 18 cm latae base late rotundatae et distinete abrupte acuminatae margine breviter late denticulatae apice breviter acutae supra sparsim breviter pilosae subtus plerumque in nervis sparsim hirtellae non glandulo-punctatae, nervis secondariis inferne aliquantum congestis; paribus tres vel quatuor subtrinervatis. Inflorescentiae subcongestae late corymboso-paniculatae, pedicellis 1-5 mm longis hirtellis. Capitula 7-8 mm alta; squamae involucri ca. 18-20 subimbricatae 3-4-seriatae extus distinete puberulae lanceolatae vel anguste oblongo-lanceolatae 2-5 mm longae anguste acutae vix scariosae; receptacula glabra. Flores ca. 30-40. Corollae lavendulae? ca. 4.5 mm longae anguste infundibulares, tubis indistinctis, lobis 5 equilateraliter triangularibus vel latioribus extus setiferis et paucis glanduliferis; filamenta antherarum in parte superiore angusta 0.5-0.6 mm longa; thecae 1.2-1.4 mm longae, appendicibus oblongo-ovatis 300-350 μ longis 175-200 μ latis; appendices stylorum lineares dense breviter papillosae. Achaenia 1.2-1.4 mm longa subglabra superne paucis setifera; carpopodia brevia; setae pappi ca. 30 plerumque 3-4 mm longae

ad apicem non dilatatae. Grana pollinis ca. 20 μ diam.
micropapillosae.

Type: MEXICO: Veracruz: Acultzinco, May 1, 1937,
Matuda 1137 (Holotype US!).

The species is apparently most closely related to *B. sordida* which occurs in the same general area. The new species is most distinct in the lesser number of flowers and involucral bracts, in the bracts being generally broader and less pubescent and in the leaf blades having a distinct acumination at the attachment to the petiole.

Acknowledgement

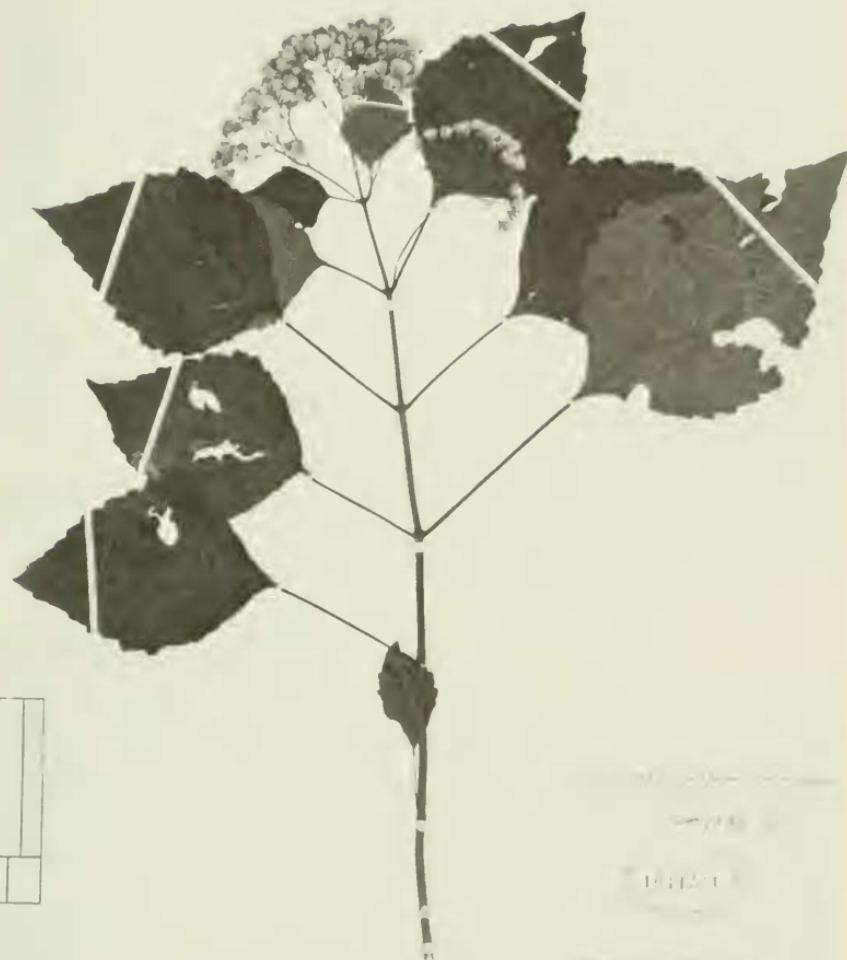
This study was supported in part by the National Science Foundation Grant GB 20502 A #1 and A #2 to the senior author.



P. S. G. C. MEXICO

2692263

Bartlettina breedlovei R.M.King & H.Robinson.



Bartlettina guatemalensis R.M.King & H.Robinson.



FLORA MEXICANA
M. H. Robinson

Bartlettina matudae R.M.King & H.Robinson.



Enlargements of heads of Bartlettina. Upper left, B. guatemalensis. Upper right, B. breedlovei. Bottom, B. matudae.